Certificate / Certificat
Zertifikat / 合格証

ROS 1811012 C001

exida hereby confirms that the:

Rosemount 925FGD Gas Detector

with 625ND Gas Sensor

Rosemount Flame & Gas Detection
Emerson Automation Solutions
Shakopee, MN - USA

Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-3

and meets requirements providing a level of integrity to:

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; Route 2_H

PFH/PFD_{avg} and Architecture Constraints must be verified for each application

Safety Function:

The 925FGD receives an input signal from the gas sensor and provides representative alarm status to its 4-20mA and relay outputs within the Safety Accuracy.

Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.

Valerie Motto
Evaluating Assessor

Rudolf P. Chalupka
Certifying Assessor

The manufacturer may use the mark:

Revision 2.0 May 7, 2024
Surveillance Audit Due
June 1, 2027

ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17065
PRODUCT CERTIFICATION BODY
#1004

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Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; Route 2_H

PFH/PFD_{avg} and Architecture Constraints must be verified for each application

925FGD Gas Detector with 625ND Gas Sensor

Systematic Capability:

The Product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each element. This element meets *exida* criteria for Route 2_H.

IEC 61508 Failure Rates in FIT*

925FGD with 625ND Sensor	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
4-20 Output	0	96	1087	99
Relay Output	517	98	840	87

* FIT = 1 failure / 10^9 hours

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/PFD_{avg} considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

Assessment Report: ROS 18/11-012 R001 V2R0 (or later)

Safety Manual: 00809-0200-4925 Rev AC (or later)

80 N Main St
Sellersville, PA 18960